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IN THE TECHNICAL COUNCIL OF THE MINISTRY OF COMMUNICATION

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Unsigned Article

The Technical Council of the Ministry of Communication has heard a lecture by S. I. Katayev, doctor of technical sciences, professor of MEIS /Moskovskiy Elektrotekhnicheskiy Institut Sviazi — Moscow Electrotechnical Communication Institute/, on the topic "Television in a Reduced Frequency Spectrum."

The paper reported on the results of scientific research and experimental work performed by the television department of the MEIS and devoted to a problem that is very important for communication engineering, viz., the reduction of the spectrum of the television signal when television images are transmitted over interurban cable lines.

During the performance of this work by the department, many possible methods for reducing the television spectrum were examined, and the method selected was that of the "alternating point" method. The choice of this method was dictated by the fact that its application did not require in principle the development of new electronic instruments.

Experiments on the tests of the selected variant gave fully satisfactory results under laboratory conditions both with respect to the quality of the television image obtained, as well as with respect to the proposed operating stability of the apparatus.

The apparatus developed makes possible narrowing the frequency band of the television channel by 30%.

Experimental models of equipment to carry out line tests over cable trunk lines are now in preparation.

The Technical Council remarked that the reduction of the frequency band occupied by the television channel is very important for the interchange of television programs between cities of the Soviet Union and with countries of peoples' democracies, and that therefore all work aimed at reducing the television channel is of timely importance.

In its resolution following the paper, the Technical Council approved the trends adopted by the department of the MEIS in first performing work on the application of the "alternating point" method and on the development of equipment employing this principle.

Because of the great importance of obtaining as soon as possible the results of the experimental check on the developed system made in an operating long-distance communication channel, and also because it is very important to make it fully possible to perform this work in the second quarter of 1954, it is essential to adopt all measures towards accelerating the production of the experimental equipment, its tuning, and its test on a trunk line.

The Technical Council has recommended that the MEIS expand the work toward further, even more effective, reduction in the frequency band of the television channel, paying particular attention to the use of the statistical laws of television transmission, and therefore that it enroll in this work the long-distance and general radio departments, in addition

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to the television department.

After completing the work on the experimental check of the "alternating-point" system, using a cable trunk line, and after experts have examined and evaluated the quality of the image, it is the intention of the Technical Council to consider the problem of the trends towards introducing the system of transmitting television images by the "alternating-point" method over interurban channels.

It is necessary to call the attention of the radio industry to the need of the rapid production of television image storage tubes, the lack of which delays the development of the most progressive methods for reducing the frequency band of the television channel.

It is necessary to adopt measures aimed at full coordination of all work on the reduction of the frequency spectrum of television channels, carried out by the Ministry of Communication and other departments and also on the exchange of experience in this field among all interested organizations.

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